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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/640,038 | 08/16/2000 | Christoph Dorr | TRW(EHR)05042 | 3171 |

26294 7590 01/23/2004

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CLEVEVLAND, OH 44114

Please

Office Action Summary

Application No.

09/640,038

Applicant(s)

DORR, CHRISTOPH

Examiner

Ernesto Garcia

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-25, 27, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) 19-21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 and 30 is/are allowed.
- 6) ☒ Claim(s) 18, 22-25 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-25 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Gottschald, 2,93,717 (see marked-up attachment).

Regarding claim 29, Gottschald discloses in Figure 1 a ball-and-socket joint comprising a joint housing 1, a ball head 2, a bearing shell 5, a housing cover 7 and a spring element 6. The joint housing 1 has a first axial end **A2** and a second axial end **A3**, the ball head 2 is provided with a ball stud 3 extending from the ball head 2. The bearing shell 5 has elastic properties and the bearing shell 5 is received in the joint housing 1. The bearing shell 5 receives the ball head 2. The ball stud 3 extends outward of the first axial end **A2** of the joint housing 1. The spring element 6 is interposed between the housing cover 7 and at least a portion **A8** of the bearing shell 5 preloading the portion **A8** of the bearing shell 5.

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Applicant is reminded that the housing cover **7** is for closing the second axial end **A3** of the joint housing **1**. The spring element **6** is able to urge the portion **A8** of the bearing shell **5** toward the first axial end **A2** thereby plastically deforming the portion **A8** of the bearing shell **5** into a final -ball-shaped contour.

Regarding claim 22, the bearing shell **5** includes a deformable area (the area of the portion of the bearing shell **5**). Applicant is reminded that the deformable area is able to enable the bearing shell to be adapted for use with joint housing of varying tolerances since the material, rubber (col. 1, line 64) that make up the bearing shell allows deformation.

Regarding claim 23, the bearing shell **32** includes separate and distinct first part **4** and second part **5**. The first part **4** is an upper shell and the second part **5** is a lower shell.

Regarding claim 24, the spring element **6** is arranged between the upper shell and the lower shell. The lower shell being the portion **A8** of the bearing shell **5** that is plastically deformed.

Regarding claim 25, the spring element **6** is a wave-shaped washer.

Claims 18 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Andrew, 3,574,370.

Regarding claim 29, Andrew discloses in Figure 1 a ball-and-socket joint comprising a joint housing **20**, a ball head **28**, a bearing shell **32**, a housing cover **24** and a spring element **21**. The joint housing **20** has a first axial end **22** and a second axial end **26**, the ball head **28** is provided with a ball stud **34** extending from the ball head **28**. The bearing shell **32** has elastic properties and the bearing shell **32** is received in the joint housing **20**. The bearing shell **32** receives the ball head **28**. The ball stud **34** extends outward of the first axial end **22** of the joint housing **20**. The spring element **21** is interposed between the housing cover **24** and at least a portion of the bearing shell **32** preloading the portion of the bearing shell **32**.

Applicant is reminded that the housing cover **24** is for closing the second axial end **26** of the joint housing **20**. The spring element **21** is able to urge the portion of the bearing shell **32** toward the first axial end **22** thereby plastically deforming the portion of the bearing shell **32** into a final -ball-shaped contour.

Regarding claim 18, the spring element **21** advances the portion of the bearing shell **32** toward the first axial end **22** of the joint housing **20** for wedging the portion of the bearing shell further into a gap formed between the ball head **28** and the joint

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housing **20** adjacent the ball stud **34** at the first axial end **22** as wear to the portion of the bearing shell **32** occurs.

Allowable Subject Matter

Claims 27 and 30 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 30, the prior art of record, Gottschald, Littman, Flumerfelt, and Andrew fail to disclose a ball-and-socket joint comprising an upper shell including a collar wedged between a housing cover and a shoulder of a joint housing wherein a spring element is provided between the upper shell and the lower shell; and,

regarding claim 27, this claim depends from claim 30.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.



Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3600

E.G.

January 12, 2004

Attachment: one marked-up copy of Gottschald, 2,993,717.

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2,993,717

